

REMARKS

This Reply with Amendment is submitted in response to an Office Action dated November 18, 2003. Claims 15-28 are presently pending. Original claims 1-14 have previously been cancelled. Claims 15-23 are herein amended and the present Remarks are respectfully submitted. Entry and consideration hereof and allowance of the application are requested.

In the outstanding Office Action, claims 15-28 are rejected under 35 U.S.C. §112, first paragraph, for an alleged lack of enablement. Particularly, the Examiner asserts that “the claims require performing cleaning of film deposition equipment comprising a reactor in a state where no wafers are received within the reactor” but also allegedly require “spraying a mixture of a cleaning gas and an inert gas onto the wafer”. The Examiner concludes that a skilled artisan would not be able to spray a gas onto a wafer which does not exist, thus, the claimed process could not be performed and, accordingly, the requirements for enablement are not met.

In reply, Applicant respectfully submits the Examiner’s holding is due mostly to a typographical error in the claims and is further based upon the Examiner’s misunderstanding of the invention. Claim 15 is herein amended to correct the typographical error. Particularly, amended claim 15 now recites a cleaning method for an ALD thin film deposition equipment comprising, inter alia, performing a main cleaning process in a state where no wafers are received within the reactor, including spraying a mixture of a cleaning gas and an inert gas onto the wafer block through the spray holes and spraying the inert gas toward edges of the wafer block through the nozzles.

An exemplary embodiment of the claimed cleaning method is described in the specification at page 14, line 20 through page 16, line 32. Therein, a cleaning method is described for removing a thin film or process byproduct thereof from an inner wall and from components of an ALD reactor. An exemplary main cleaning process is described as being performed in a state where no wafers are present in the reactor. Page 14, lines 26-27.

The main cleaning process includes spraying various gases onto a wafer block disposed in the reactor. Page 15, lines 3-10.

Claim 15 previously recited, “spraying a mixture of a cleaning gas and an inert gas onto the wafer.” This recitation includes an unintended typographical error. Claim 15 is revised herein to recite, “spraying a mixture of a cleaning gas and an inert gas onto the wafer block” (emphasis added), thus rectifying the typographical error. Based upon the discussion above, claim 15 now clearly accords with the written description provided in the specification.

Thus, claim 15 now recites a cleaning method for ALD equipment performed in state where no wafers are received thereby, including spraying a gas onto a wafer block disposed in the ALD equipment. Claim 15 is herein clarified such that the skilled artisan could certainly practice the invention.

No new matter is added by the present amendment as support is found in the specification at least at the sections thereof indicated above. Further, it is also evident that Applicant’s original disclosure contains sufficient information and description regarding the subject matter of claim 15 as to enable one skilled in the pertinent art to make and use the claimed invention. That is, any experimentation needed to practice the invention is not undue nor unreasonable and therefore the enablement requirement is satisfied. *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916); *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Accordingly, claim 15 satisfies the enablement requirement of §112, first paragraph. Reconsideration and withdrawal of the outstanding §112 rejection is respectfully requested.

Claims 16-23 are also herein amended to address several antecedent basis matters and other informalities detected by Applicant. The amendment of claims 16-23 does not introduce any new matter as support is clearly found throughout the original filed applications papers.

It is believed that the foregoing is fully responsive to the present office action and that the outstanding §112 rejection is herein overcome. Since claims 15-28 are not further rejected or objected to by the Examiner, all the pending claims are thusly allowable to Applicant. Accordingly, prompt issuance of a Notice of Allowance is requested.

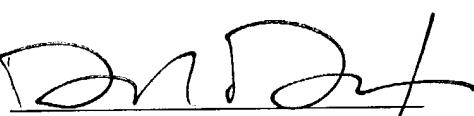
The Examiner is invited to contact Applicant's attorneys at the below-indicated telephone number regarding this response or otherwise concerning the present application.

Applicant hereby petitions for any necessary extension of time required for consideration of the present Reply.

Please charge any required fees for this response, or otherwise concerning the present application, to Deposit Account No. 06-1130 maintained by Applicant's attorney.

Respectfully submitted,

By:



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